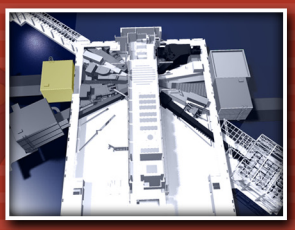
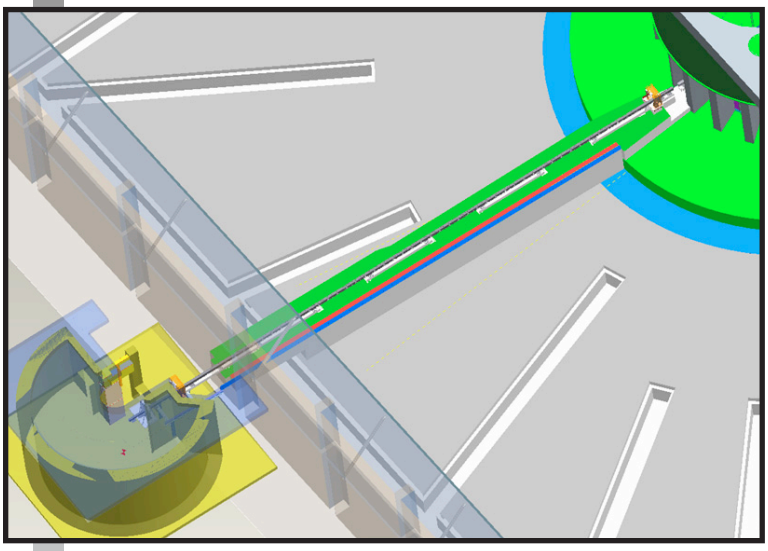
Instrument Fact Sheet

BEAM LINE 5



Cold Neutron Chopper Spectrometer

The Cold Neutron Chopper Spectrometer (CNCS) on beam line 5 is a high resolution, direct geometry, multi-chopper inelastic spectrometer designed to provide flexibility in the choice of energy resolution and to perform best at low incident energies (2-50 meV). Initially, the detector coverage around the sample is 1 sr, but a later upgrade to 3 sr is possible. CNCS experiments will typically use energy resolution between 10 and 500 μeV. A broad variety of scientific problems, ranging from complex and quantum fluids to magnetism and chemical spectroscopy, will be addressed through experiments on CNCS at SNS.

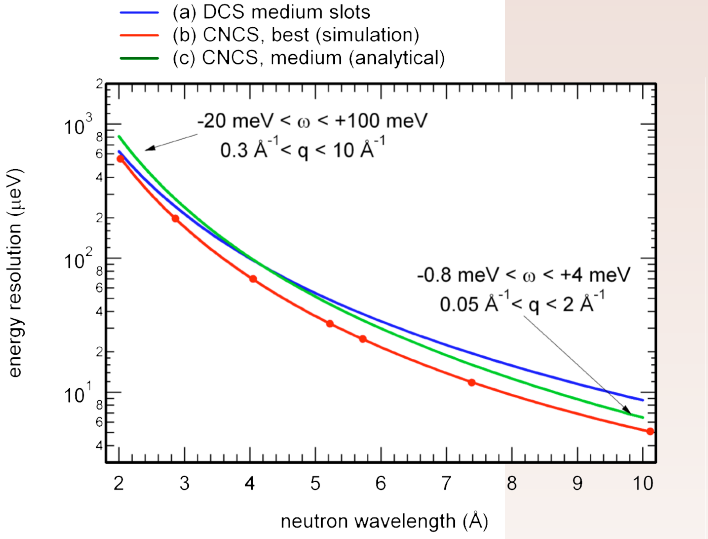


Specifications

Beam line	5
Source-sample distance	36.2 m
Sample-detector distance	3.5 m
Angular coverage	-90° … +140° horizontally; ±25 ° vertically
Energy resolution	10 μeV – 500 μeV
Incident energy range	2 – 50 meV
Momentum transfer range	0.05 – 10 Å $^{-1}$

Recent Significant Events:

- The secondary spectrometer will be housed in a satellite building, and the construction contract has been awarded.
- Groundbreaking for the instrument satellite building is scheduled to begin in early July, 2006.
- Key components, such as the neutron guide and one of the high-speed choppers, are expected to arrive at SNS later in 2006.



For more information, contact Cold Neutron Chopper Spectrometer staff:

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